AMENDMENTS TO THE CLAIMS

1. (original) In a fragmenting rotor assembly for waste wood and other fragmentable material

a. a drive shaft and mechanism for driving said shaft in a direction of rotation;

b. a series of radially projecting hammers situated along the axis of said shaft and powered by said shaft, the hammers having a leading portion and a trailing portion;

c. replaceable fragmenting knives removably secured to the leading portions of said hammers; and

d. axially extending radially outer edges on the radially outermost portions of said knives having inclined portions extending in a radially inclined direction from a non-inclined, axially extending, initial work contacting portion on the radially outermost portion of said edges.

813

2. (original) The rotor assembly of claim 1 wherein a series of discs are fixed axially along said shaft and pairs of said hammers mount axially between them at circumferentially spaced intervals, and alternating inclined edge portions of said knives on said hammers incline in axially opposite directions.

3. (original) The rotor assembly of claim 2 wherein said knives are double edged and have like inner cutting edges on their inner radially projecting edges with inclined portions which, however, incline in a radially opposite direction.

4. (original) The rotor assembly of claim 3 wherein said hammers adjacent each disc are circumferentially spaced apart and deflecting members mount circumferentially between said hammers and project radially to an extent to deflect fragments ahead of said radially inner edges on said knives.

5. (original) The rotor assembly of claim 4 wherein said deflecting members have outer ends rotating in a circumferential path lying radially short of the circumferential path of said radially outer edges of said knives.

B13

6. (original) The rotor assembly of claim 5 wherein said hammers and deflecting members are disposed in axially staggered helical formation, said hammers being mounted to space said knives circumferentially at substantially 180 degrees.

7. (original) The rotor assembly of claim 6 wherein said deflecting members are generally delta shaped and are pivotally supported with said discs, and said axially aligned deflecting members and hammers are connected by axially extending rods extending through said inner ends of said members.

8. (original) The rotor assembly of claim 7 wherein said

deflecting members are disposed in substantially 180 degree spaced relation.

9. (original) The rotor assembly of claim 5 wherein end plates form a part of said rotor assembly and an endmost member adjacent each end plate carries an axially outwardly extending fragmenting body radially screening said end plates.

10. (original) The rotor assembly of claim 7 wherein end plate assemblies are provided at each end of said rotor assembly and include end plates with cavities for receiving circumferentially adjustable locking plates, the end plates and locking plates both having rod receiving openings which can be aligned in a rod removing position.

B13

11. (original) In a fragmenting rotor assembly for waste wood and other fragmentable material

a. a drive shaft and mechanism for driving said shaft in a direction of rotation;

b. a series of radially projecting hammers situated along the axis of said shaft and powered by said shaft, the hammers having a leading portion and a trailing portion;

c. a series of discs forming a part of said shaft axially between at least a pair of radially aligned hammers;

d. double edged fragmenting knives removably secured to the leading portions of said hammers;

e. said knives having axially extending radially outermost edges and axially extending radially innermost edges spaced radially from said outermost edges; and

f. replaceable members radially between each pair of hammers having outer ends traveling in a circumferential path of greater radial extent than the circumferential path of said innermost edges on said knives.

12. (original) In a fragmenting rotor assembly for waste wood and other fragmentable material:

a. a drive shaft and mechanism for driving said shaft in a direction of rotation;

b. a series of generally radially projecting hammers situated along the axis of said shaft and powered by said shaft, the hammers having a leading portion and a trailing portion;

c. fragmenting knives removably secured to the leading portions of said hammers;

d. said knives having axially extending reducing edges; and

e. deflecting members mounted independently of said hammers and in radial alignment therewith having outer ends traveling in a circumferential path of lesser radial extent than the circumferential path of said knife edges.

13. (original) The assembly of claim 12 wherein said hammers are offset radially to dispose said knives in a forwardly

radially tilted position with respect to the axis of said shaft.

14. (original) The assembly of claim 12 wherein a plurality of axially spaced discs are provided on said shaft and each disc mounts pairs of said hammers on opposite sides thereof to dispose two axially adjacent hammer paths of travel in said spaces, deflecting members are mounted independently in the spaces between said discs in radial alignment with said hammers, and said deflecting members and hammers in axially adjacent spaces are axially reversed in radial alignment.

15. (original) The assembly of claim 12 wherein said deflecting members comprise generally oblong bodies with a central portion and with lobular outer ends, and said hammers and deflecting members are helically staggered along the axis of said shaft with each deflecting member lobular end being in radial planar alignment with a hammer knife.

B13

16. (original) The assembly of claim 12 wherein said hammers mount to the radially outer sides of each disc and the knives are of such axial extent that their paths of annular travel axially overlap.

17. (original) The assembly of claim 16 wherein the knives of hammers secured to the opposite sides of the same disc have a path of overlap.

18. (original) The assembly of claim 17 where the knives of the hammers secured to adjacent discs also have axially overlapping paths of travel but of lesser axial extent.

19. (currently amended) In a fragmenting rotor assembly for waste wood and other fragmentable material:

a. a drive shaft and mechanism for driving said shaft in a direction of rotation, said drive shaft incorporating axially spaced discs along its axis;

b. a series of radially projecting ~~hammers~~ knife supports situated along the axis of said shaft on said discs and powered by said shaft, the ~~hammers~~ knife supports having a leading portion and a trailing portion;

c. fragmenting knives removably secured to the leading portions of said ~~hammers~~ knife supports;

d. said knives having axially extending reducing edges; and

B13

e. said ~~hammers~~ knife supports being mounted at the sides of each disc with their knives being of such axial extent as to have axially overlapping paths of rotary travel and the discs being so spaced that said knives on the confronting sides of adjacent discs also have axially overlapping paths of travel.

20. (currently amended) The assembly of claim 19 wherein ~~spacer~~ deflector members are provided in radial alignment with

said ~~hammers~~ knife supports circumferentially between them.

21. (currently amended) The assembly of claim 20 wherein a series of circumferentially spaced axially extending rods are provided to extend between said discs and said ~~hammers~~ knife supports, and ~~spacers~~ deflectors are rigidly mounted on said rods in radially alternating relation with said ~~hammers~~ knife supports.

22. (original) The rotor assembly of claim 21 wherein end plate assemblies are provided at each end of said rotor assembly and include end plates with cavities for receiving circumferentially adjustable locking plates, the end plates and locking plates both having rod receiving openings which can be aligned in a rod removing position and which receive said rods.

23. (original) In a fragmenting rotor assembly for waste wood and other fragmentable material

a. a drive shaft and mechanism for driving said shaft in a direction of rotation;

B13

b. a series of radially projecting hammers situated along the axis of said shaft and powered by said shaft, the hammers having a leading portion and a trailing portion;

c. a series of discs forming a part of said shaft axially between at least a pair of radially aligned hammers;

d. fragmenting knives removably secured to the leading portions of said hammers;

e. said knives having axially extending radially outermost edges; and

f. deflecting members radially aligned with said hammers having lobular outer ends traveling in a circumferential path of lesser radial extent than the circumferential path of said edges on said knives.

24. (original) The assembly of claim 23 wherein said hammers have rearwardly and radially inwardly inclined knife mount front surfaces on their radially outer ends with opposed radially inwardly spaced oppositely inclined front surfaces, generally oblong cutting knives with upper front cutting surfaces lie against said knife mount surfaces, and wedge blocks, having one surface engaged with one of said knives and another surface engaged with one of said oppositely inclined surfaces, removably secure each knife in position.

25. (original) The assembly of claim 23 wherein said hammers are mounted off a radial central plane to tilt forwardly with respect to a radial plane through said axis and dispose said knife cutting edges forwardly.

B13

26. (original) In a method of making a fragmenting rotor assembly for waste wood and other fragmentable material:

a. providing a drive shaft and mechanism for

driving said shaft in a direction of rotation;

b. providing a series of radially projecting hammers situated along the axis of said shaft and powered by said shaft, the hammers having a leading portion and a trailing portion;

c. providing fragmenting knives with axially extending reducing edges removably secured to the leading portions of said hammers; and

d. mounting separately replaceable deflecting members independently of said hammers radially between each pair of hammers which have outer ends moving in a circumferential path of lesser radial extent than the circumferential path of said knife edges.

27. (original) The method of claim 26 comprising providing said deflecting members as generally oblong bodies with a central portion and with lobular outer ends, and providing said hammers and deflecting members in helically staggered relation along the axis of said shaft with each deflecting member lobular end in radial plane alignment with a hammer knife.

28. (original) The method of claim 26 comprising mounting said hammers at the sides of each disc so that the knives are of such axial extent that their paths of annular travel axially overlap.

29. (original) The method of claim 26 wherein the knives of hammers secured to the opposite sides of the same disc have a rotary path of axial overlap.

30. (original) The method of claim 26 comprising mounting said deflecting members in radial alignment with said hammers.

31. (original) The method of claim 30 comprising mounting a series of circumferentially spaced axially extending pairs of rods to extend between said discs, and mounting said hammers and deflecting members on said rods to extend between said pairs of rods in radially alternating relation.

B13

32. (currently amended) In a fragmenting rotor assembly for waste wood and other fragmentable material:

a. a drive shaft and mechanism for driving said shaft in a direction of rotation <u>about an axis of rotation</u>, said drive shaft incorporating axially spaced radially projecting ~~spacers~~ <u>rotors</u> along its axis;

b. a series of radially projecting hammer~~s~~ <u>supports</u> situated along the axis of said shaft ~~on said spacers~~ and powered by said shaft <u>mechanism</u>, the hammer~~s~~ <u>supports</u> having ~~a~~ heads with a leading face portion and a trailing face portion extending radially outward of said ~~spacers~~ <u>rotors</u>;

c. <u>hammers comprising</u> fragmenting knives removably secured to said leading portions of said hammer~~s~~ <u>supports</u>;

d. said knives having axially extending reducing

edges; and

e. said hammers~~~~ supports being mounted at the sides of said ~~spacers~~ rotors to partly overlie said ~~spacers~~ rotors axially.

33. (new) In a fragmenting rotor assembly operable with anvil surface for waste wood and other fragmentable material:

a. a drive shaft assembly including mechanism for driving said shaft assembly in a direction of rotation about an axis, said drive shaft assembly incorporating a plurality of radially projecting rotor members, having radial sides, axially spaced along its axis;

b. a series of radially projecting hammer supports situated along the axis of said shaft assembly in association with said rotor members and powered by said shaft assembly, the hammer supports having heads with a leading face portion and a trailing face portion extending generally radially outwardly of said rotors;

B13

c. hammers comprising fragmenting knives removably secured to said leading portions of said hammer supports;

d. said knives including axially extending fragmenting edges in circumferentially displaced disposition; and

e. said hammer supports being mounted along said radial sides of said rotor members with said circumferentially displaced knife edges being of such axial extent as to provide partly axially overlapping knife edge paths of rotary travel

for said circumferentially displaced knife edges.

34. (new) The rotor assembly of claim 33 wherein said knife edges having partly overlapping paths of travel are mounted on hammer supports along opposite radial sides of the same rotor element.

35. (new) The rotor assembly of claim 34 in which said knife edges having partly overlapping paths of travel are axially helically positioned along said drive shaft assembly.

36. (new) The rotor assembly of claim 33 in which said knife edges having partly overlapping paths of travel are sidewisely associated with opposite sides of the same rotor element.

B13

37. (new) The rotor assembly of claim 33 in which said knife edges having partly overlapping paths of travel are carbide coated.

38. (new) The rotor assembly of claim 33 wherein said knife edges are tilted radially forwardly with respect to a radial line extending from said axis generally centrally through each of said hammer supports to lie forwardly thereof and cut more aggressively.

39. (new) The rotor assembly of claim 33 wherein said hammer supports and rotors have a side by side sidewisely configured

relationship such that one of said hammer supports and said series of rotors receives and generally radially aligns with the other of said hammer supports and said rotors.

40. (new) The rotor assembly of claim 33 wherein said drive shaft mechanism includes a shaft and a plurality of circumferentially spaced rods extending in an axially parallel direction radially outwardly of said shaft, said rotor members being fixed to said shaft and supporting said rods, and said hammer supports being non-rotatably but releasably connected to said rods.

41. (new) The rotor assembly of claim 40 wherein said hammer supports are mounted along opposite sides of a rotor and are shouldered to partly overlie said rotors.

B13

42. (new) In a fragmenting rotor assembly operable with an anvil mechanism for fragmenting waste wood and other fragmentable material:

a. a drive shaft assembly including a mechanism for driving said shaft assembly in a direction of rotation about an axis of rotation, said drive shaft assembly incorporating axially spaced radially projecting rotors along its axis;

b. a series of radially projecting hammer supports powered by said shaft assembly situated along the axis of said shaft assembly and positioned to lie sidewisely contiguously

to said rotors along said axis, the hammer supports extending radially outward of said rotors and having heads with a leading face portion and a trailing face portion;

c. hammers comprising fragmenting knives removably secured to said leading portions of said hammer supports;

d. said knives having axially extending reducing edges; and

e. one of said contiguous hammer supports and rotors being sidewisely shouldered to be partly sidewisely received by shoulder received surface on the other.

43. (new) The assembly of claim 42 wherein said sidewisely shouldered configuration and shoulder receiving surface are complementally curvilinear on generally a radius extending from said axis.

B13

44. (new) The assembly of claim 42 in which said hammer supports on opposite sides of said rotors are sidewisely shouldered to partly overlie said rotors from the opposite axial direction and thereby protect them.

45. (new) The assembly of claim 42 in which deflector members in substantially radial alignment with said hammer supports mount circumferentially between said hammer supports.

46. (new) The assembly of claim 45 in which said drive shaft assembly includes a plurality of circumferentially spaced rods

extending axially parallely, and said hammer supports are non-rotatably received thereon, and deflector members circumferentially between said hammer supports and in substantial radial alignment with them mounted non-rotatably on said rods.

47. (new) The rotor assembly of claim 42 wherein said knife edges have partly axially overlapping paths of travel and are axially helically positioned along said drive shaft assembly.

48. (new) In a fragmenting rotor assembly operable with anvil surface for fragmenting waste wood and other fragmentable material:

B13

a. a drive shaft mechanism including an element for driving said shaft mechanism in a direction of rotation about an axis of rotation, said drive shaft mechanism incorporating axially spaced radially projecting rotors and a plurality of circumferentially spaced members extending in an axially parallel direction spanning said rotors;

b. a series of radially projecting hammer supports being situated along the axis of said mechanism and supported between said rotors axially, said hammer supports being non-rotatably supported on said members and powered by said mechanism, said hammer supports having radially outward heads with a leading face portion and a trailing portion radially outward of said members and rotors;

c. said hammer heads comprising fragmenting knives

secured to said leading portions of said hammer supports, and having axially extending reducing edges; and

d. said hammer supports being mounted contiguously with relation to said rotors at opposite sides of said rotors axially with said reducing edges on said knives on hammer supports on opposite sides of said rotors partially axially lapping said rotors.

49. (new) The assembly of claim 48 wherein said rotors have openings slidably supporting said members and hammer supports for replacement removal of said hammer supports from said members.

50. (new) The assembly of claim 49 wherein deflectors slidably but radially rigidly mount on said members circumferentially between said hammer supports in general radial alignment with said hammer supports.

51. (new) The rotor assembly of claim 48 wherein radially aligned hammer supports have hammer knife edges with partly axially overlapping rotary paths of knife edge travel.

52. (new) The rotor assembly of claim 50 wherein said rotors incorporate pairs of rotors and an axially contiguous pair of hammer supports with radially aligned deflectors and having side by side paths of rotary travel generally fill the axial space between said pairs of said rotors.

53. (new) In a fragmenting rotor assembly, operable with anvil surface for fragmenting waste wood and other fragmentable material:

a. a drive shaft and mechanism for driving said shaft in a direction of rotation about an axis, said drive shaft incorporating axially spaced radially projecting rotors along its axis;

b. a series of radially projecting hammer legs situated along the axis of said shaft on said rotors and powered by said shaft, the hammer legs having heads with a leading face portion and a trailing face portion radially outward of said rotors; and

c. fragmenting knives having axially extending reducing edges removably secured to the leading portions of said hammer heads; and

d. said hammer legs being mounted at the sides of said rotors to partly overlie said rotors axially and being configured to be received on said rotors.

54. (new) The rotor assembly of claim 53 wherein deflector members are situated circumferentially between said hammer legs.

B13
Conclusion